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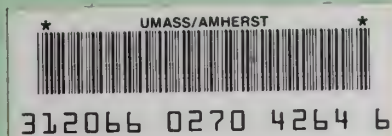


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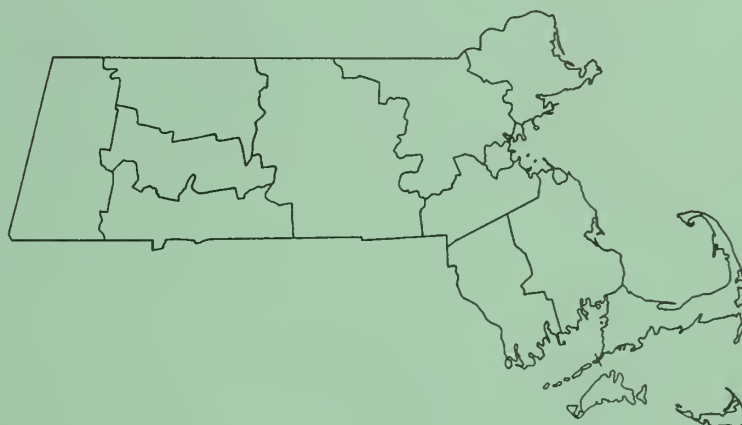


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HEALTH RISKS & PREVENTIVE BEHAVIOR AMONG MASSACHUSETTS ADULTS, 1997



RESULTS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM

CHRONIC DISEASE SURVEILLANCE PROGRAM
MASSACHUSETTS DEPARTMENT OF
PUBLIC HEALTH
JULY 1999

Introduction

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual, random, statewide telephone survey of Massachusetts adults aged 18 years or older. Through cooperative agreements with the Centers for Disease Control and Prevention (CDC) and state Departments of Public Health, similar surveys are conducted in all states. The BRFSS collects information on a wide variety of health issues, ranging from health-related behavior and access to medical care to opinions on health-related policy issues. Responses to these questions provide important information about the prevalence of risk factors that are responsible for a large proportion of premature death, illness, and disability among Massachusetts residents. The information obtained in this survey assists in identifying the need for health interventions, monitoring the effectiveness of existing intervention and prevention programs, developing health policy and legislation, and measuring progress toward attaining state and national health objectives.

This report summarizes selected results from the 1997 survey. To identify variation in risk behavior and health characteristics, we have highlighted differences by gender, age, race/ethnicity, education, income, and other characteristics of interest. When possible, we have compared results from Massachusetts to Healthy People 2000 objectives and, for a national comparison, to the median value obtained from all state surveys. We have also ranked Massachusetts relative to other states on a scale where the lowest risk or healthiest behavior ranks first.

To compare risk behavior and health characteristics of Massachusetts adults in 1997 to those reported in the past, we have included results from the Massachusetts BRFSS survey conducted in 1992 (Table 3).

Methods

The BRFSS has been conducted in Massachusetts since 1986. In 1997, the BRFSS was conducted by Macro International, Inc., using a list-assisted random-digit-dial sampling methodology. Telephone numbers were randomly selected, and multiple attempts were made to reach each phone number. To be eligible for the survey, the telephone had to serve a household occupied by at least one adult aged 18 years or older. Institutions, group quarters of ten or more unrelated adults, and temporary residences being occupied for less than a month, such as summer homes, were excluded.

One adult from each household was randomly selected to complete the interview. No proxy respondents or substitutions were allowed if the selected adult was unable to complete the interview for any reason, such as a language barrier, disability, or lack of availability. In addition to English, the survey was also conducted in Spanish and Portuguese. A total of 3725 interviews were completed in 1997. Interviews were completed in 57 % of eligible households.

[continued on back cover]

General Health Status

- 12% of Massachusetts adults described their general health as fair or poor
- Characteristics of adults who were more likely to describe their general health as fair or poor:
 - older (Figure 1a)
 - less than high school education
 - household income lower than \$ 25,000

Fair or poor health: National median = 13%

Figure 1a.

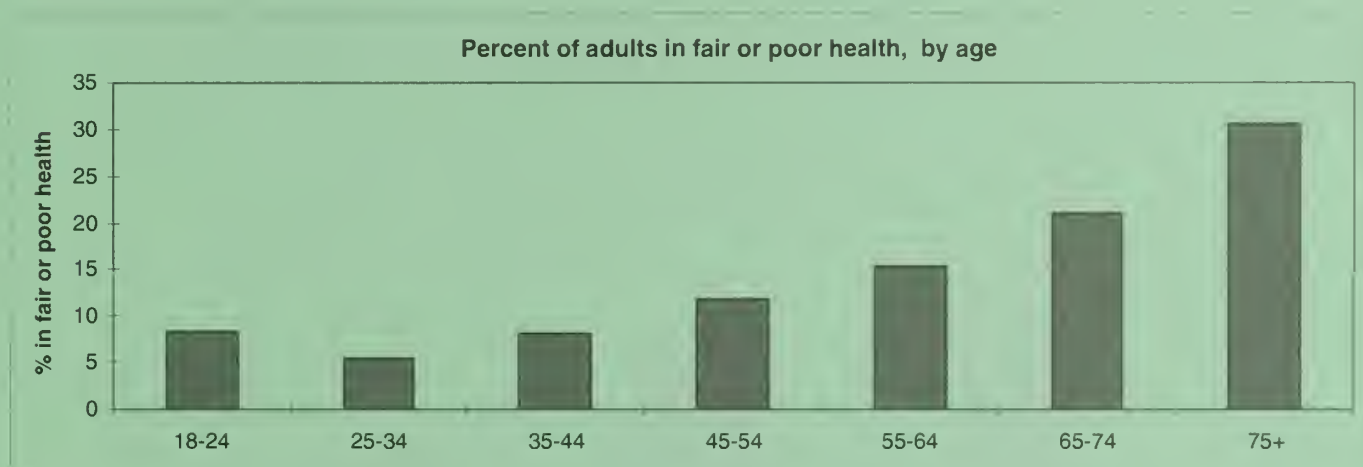


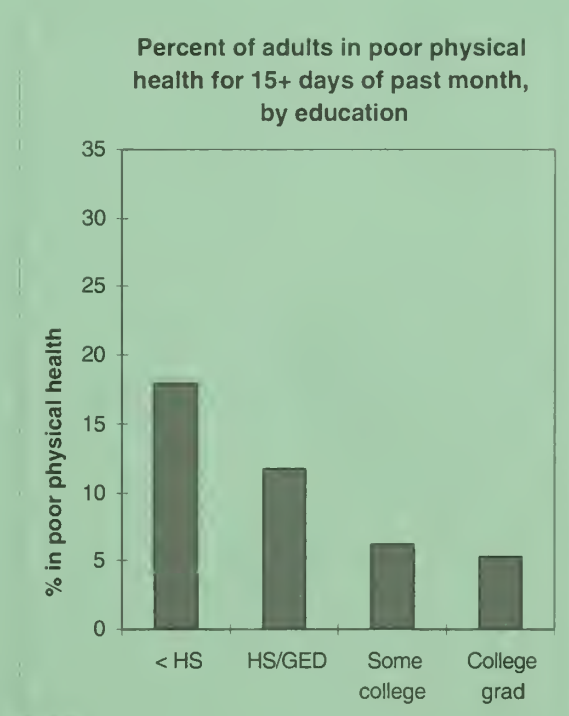
Figure 1b.

Physical health

- 9% of adults reported poor physical health for at least half of the past month
- Characteristics of adults more likely to describe their physical health as poor in the past month:
 - 65+ years
 - less education (Figure 1b)
 - household income lower than \$25, 000

Mental health

- 6% of adults reported poor mental health for at least half of the past month
- Characteristics of adults more likely to report poor mental health for at least half of the past month:
 - female
 - high school education or less

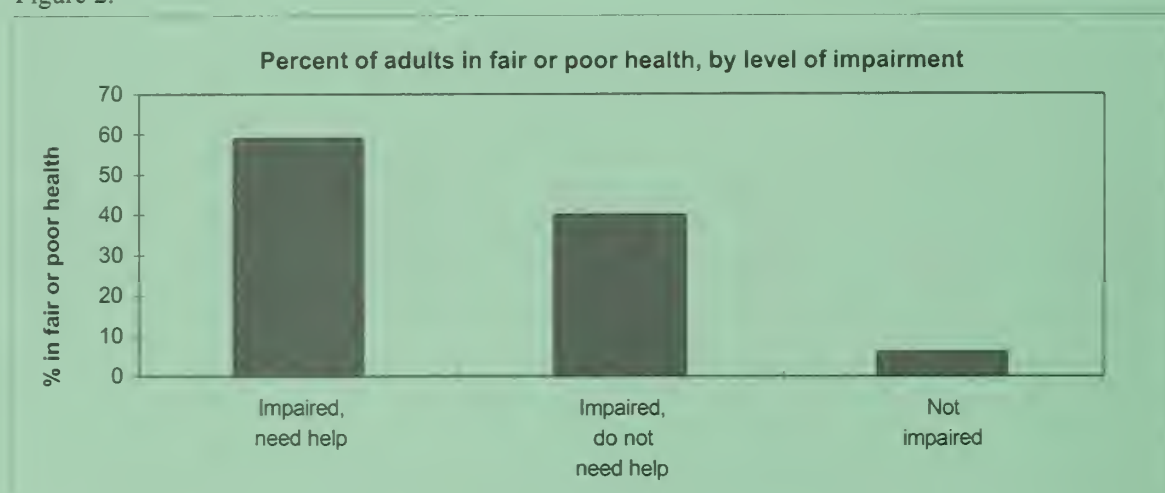


Disability/ Activity Limitation

- 16% of Massachusetts adults were limited in some activity because of an impairment or health problem
- Characteristics of adults more likely to have a limitation:
 - older
 - less than high school education
 - household income lower than \$ 25,000

Among adults who were limited by impairments, 82% had long-term impairments of one year or more. Of those with long-term impairments, 34% needed help with personal care or routine activities. 59% of adults with long-term impairments who needed help described their health as fair or poor compared to 40% of those with long-term impairments who did not need help and 6% of those without impairments (Figure 2).

Figure 2.



Among individuals with a long-term impairment who needed help with personal care or routine needs, 62% said that pain prevented them from engaging in daily activities. They were also more likely than those who did not require assistance to feel depressed, worried or anxious, and to feel that they did not get enough sleep. They were less likely to report that they felt healthy and full of energy. (Table 1).

Table 1. Indicators of quality of life for long-termed impaired adults by whether or not they are in need of help for routine activities or personal care .

Indicators of health status that were present for at least half of the past month	Long-term impaired needing help (%)	Long-term impaired not needing help (%)	Difference (%)
Pain made it hard to do usual activities	62	20	+42
Felt sad, blue or depressed	35	14	+21
Felt worried, tense or anxious	37	19	+18
Did not get enough sleep	45	31	+14
Felt very healthy and full of energy	20	47	-27

Health Insurance and Health Care Access

- 8% of Massachusetts adults were uninsured at the time of interview
- Characteristics of adults more likely to be uninsured:
 - male
 - 18-24 years
 - less education
 - lower household income
 - black, Hispanic, or other race (Figure 3a)
 - self-employed or unemployed (Figure 3b)

Uninsured: National median = 12%

Fifty-nine percent of those who were uninsured lacked insurance for more than a year, and 25% lacked insurance for more than five years.

Reasons for being uninsured

The main reasons for lacking health insurance were loss of employment (31%), inability to afford premiums (31%), and lack of employer coverage (15%). 37% of the uninsured needed to see a doctor at some time in the past 12 months, but could not because of the cost, compared to 5% of those who did have insurance (Figure 3c).

Figure 3a.

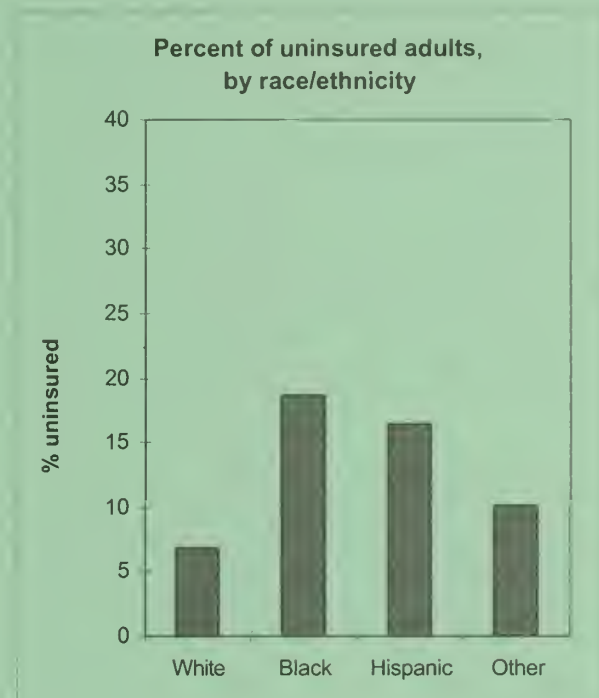


Figure 3b.

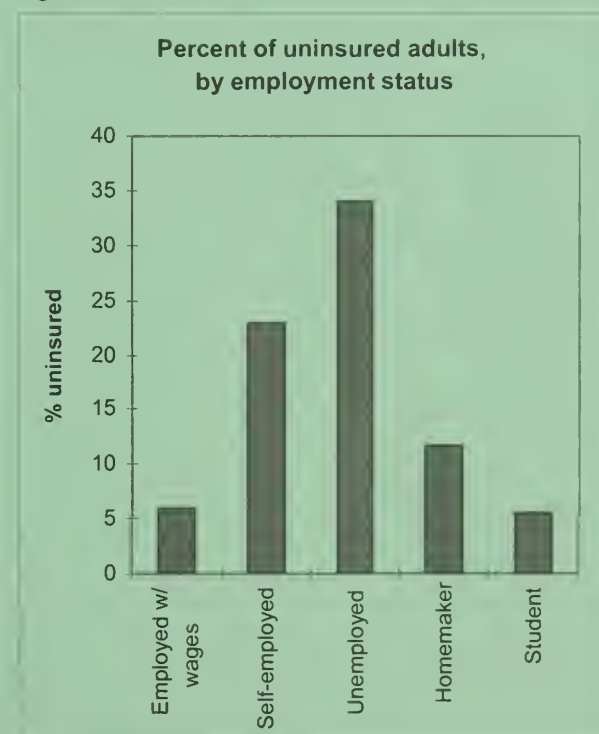
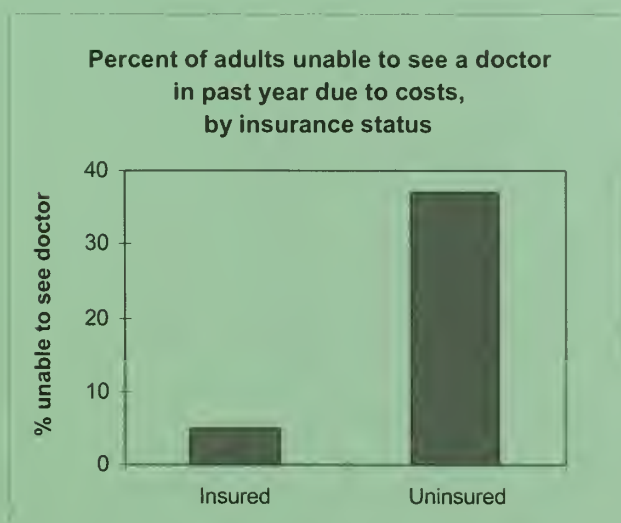


Figure 3c.



Smoking

- In 1997, 20.6% of Massachusetts adults were current smokers, 29.4% were former smokers, and 50% had never smoked
- Characteristics of adults more likely to be current smokers:
 - younger (Figure 4a)
 - white
 - divorced
 - household income lower than \$75,000
 - less education (Figure 4b)

Current smoking: National median = 23.4%

Smoking cessation

Fifty-nine percent of all current smokers had made a quit attempt for at least one day in the past year. As of the time of interview, an estimated 7% of smokers had quit smoking in the past year.

Cigar smoking

Fourteen percent of Massachusetts adults had smoked a cigar in the past year. Men and younger adults were more likely to have done so.

Smoking policy

- 87% of Massachusetts residents felt that cigarette companies should list the ingredients contained in their brands
- Support for smoking bans in public places:
 - 75% for indoor sporting events
 - 69% for indoor shopping malls
 - 61% for indoor work areas
 - 50% for restaurants
 - 24% for bars and cocktail lounges
 - 22% for outdoor sporting events
- 56% of adults did not allow smoking in any part of their house

Figure 4a.

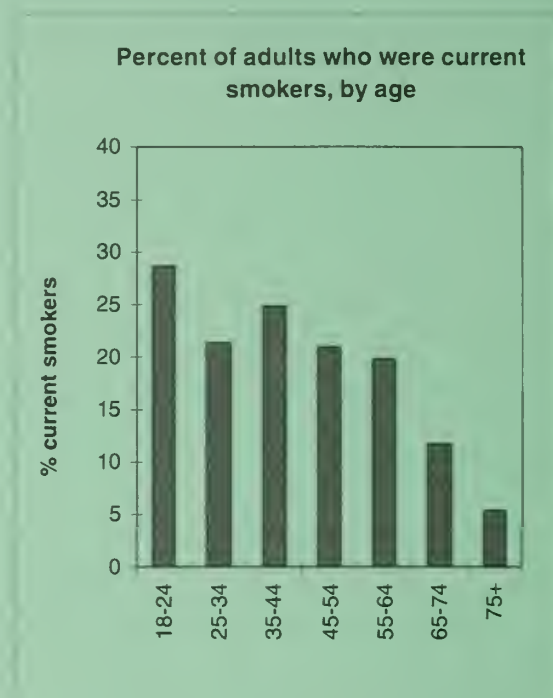
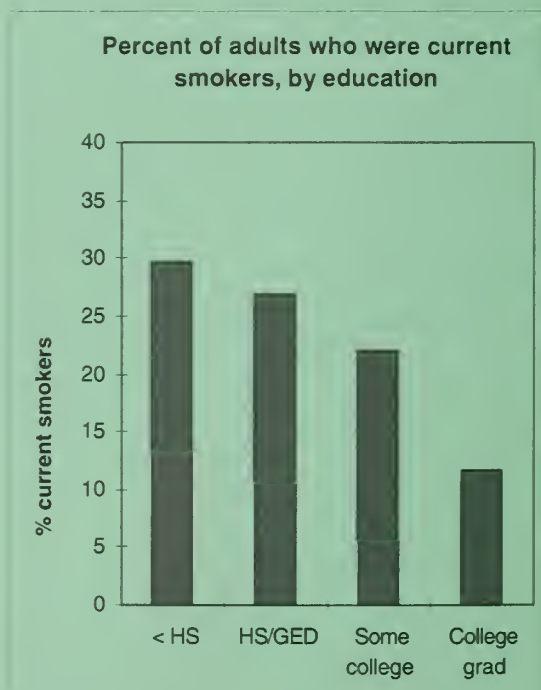


Figure 4b.



Alcohol Use

Binge drinking

- 18% of Massachusetts adults consumed 5 or more drinks on at least one occasion during the past month (binge drinking)
- Characteristics of adults more likely to be binge drinkers:
 - male (Figure 5a)
 - 18-24 years
 - white

Among 18-24 year olds, students and those not in school were equally likely to binge drink. Of men in this age range, 55% had engaged in binge drinking.

Binge drinking: National median = 15%

Heavy Drinking

- 4% of adults consumed 60 or more drinks in the past month (heavy drinking)
- Characteristics of adults more likely to be heavy drinkers:
 - male
 - 18-24 years (Figure 5b)
 - white

Heavy drinking: National median = 3%

Driving while intoxicated

- 2% of adults had driven while intoxicated in the past month
- Characteristics of adults more likely to have driven while intoxicated:
 - male
 - younger than 45 years

Driving while intoxicated: National median = 2%

Figure 5a.

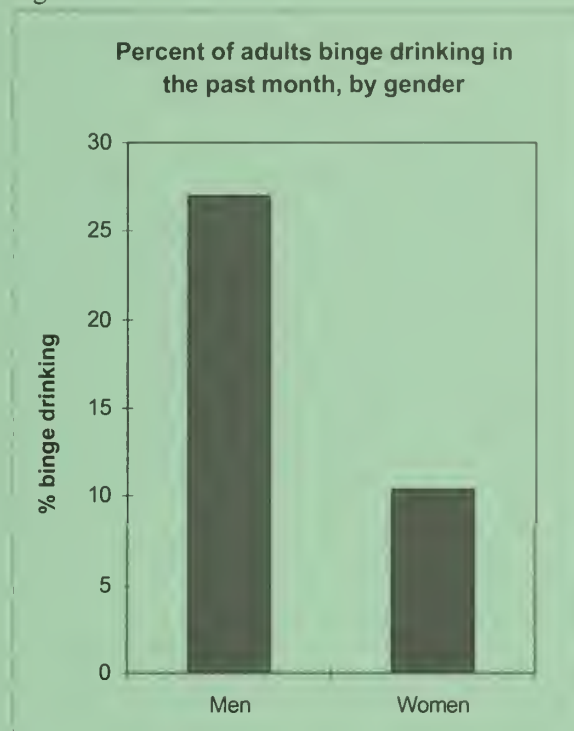
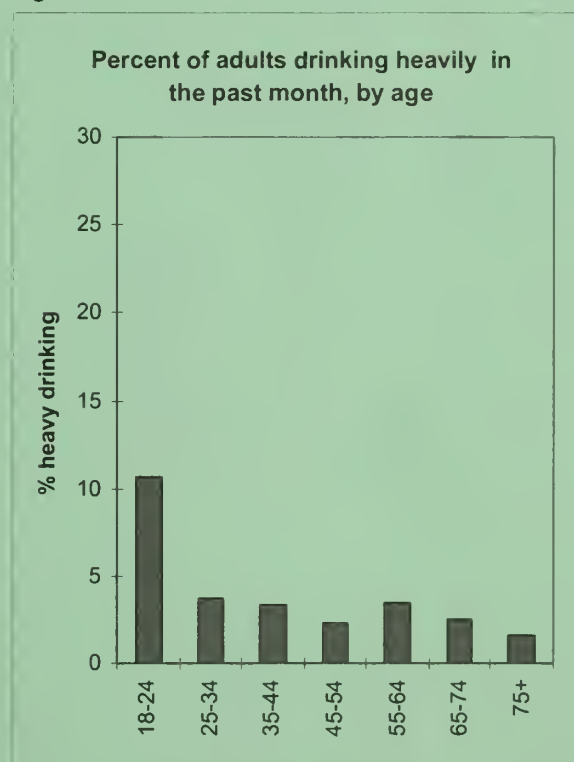


Figure 5b.



Seatbelt Use

- 63% of Massachusetts adults always wore seatbelts when driving or riding in a car
- Characteristics of adults who were more likely to always use a seatbelt:
 - female (Figure 6a)
 - more education (Figure 6b)
 - household income higher than \$75,000

Regular use of seatbelt: National median = 69%

Among children

- 89% of adults reported that their oldest child under age 16 always uses a car safety seat (for children under 5 years) or a seatbelt (for children 5 years and over)

Regular use of safety seat or seatbelt by oldest child under age 16: National median = 83%

Figure 6a.

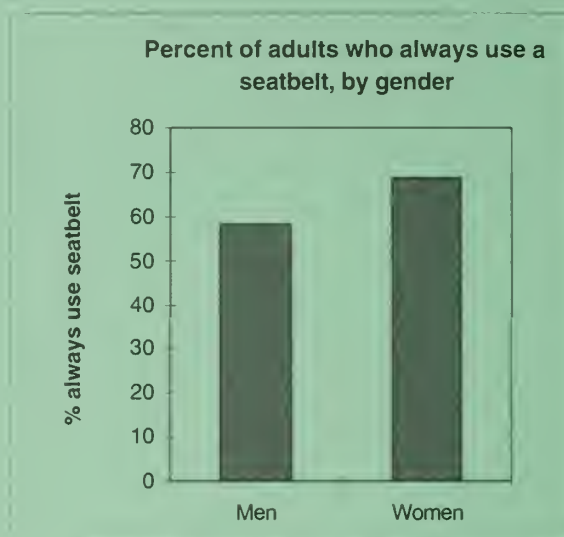
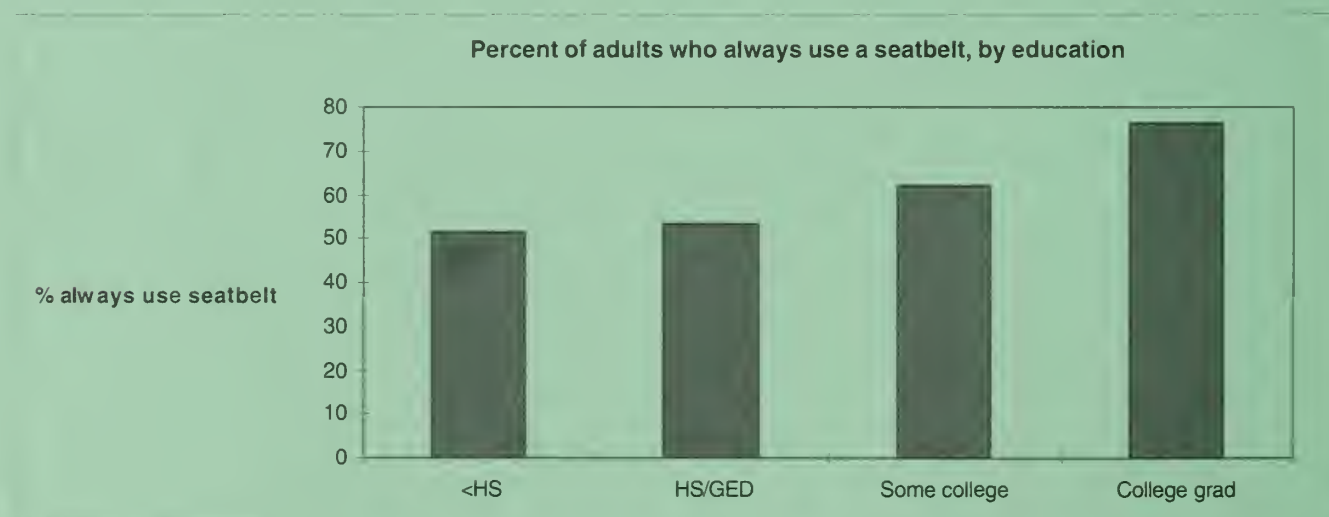


Figure 6b.



Breast Cancer Screening

Clinical breast exam (CBE)

- In 1997, 84% of all Massachusetts adult women had had a clinical breast exam within the past two years
- Characteristics of women more likely to have had a clinical breast exam in the past 2 years:
 - 25-74 years (Figure 7a)
 - white
 - at least some college education

Mammogram¹

- 82% of women age 50 years or older had had a mammogram in the past two years
- Characteristics of women age 50+ years who were more likely to have had a mammogram in the past 2 years:
 - younger than 75 years
 - at least some college education (Figure 7b)

Mammogram in past 2 years among women age 50+: National median = 74%

Clinical breast exam (CBE) and mammogram

- 75% of women age 50 or older had had both a CBE and a mammogram in the past 2 years
- Characteristics of women age 50 or older who had had both a CBE and a mammogram:
 - white
 - younger (Figure 7c)

*Clinical breast exam and mammogram in the past 2 years among women age 50+:
National median = 67%*

¹ The American Cancer Society recommends that women aged 20-39 have monthly self-exams and annual clinical breast exams and that women age 40+ have monthly self-exams, annual clinical breast exams and a mammogram every year. The analyses in this report have been restricted to women age 50+ receiving a mammogram within the last two years for comparison with results reported for other states.

Figure 7a.

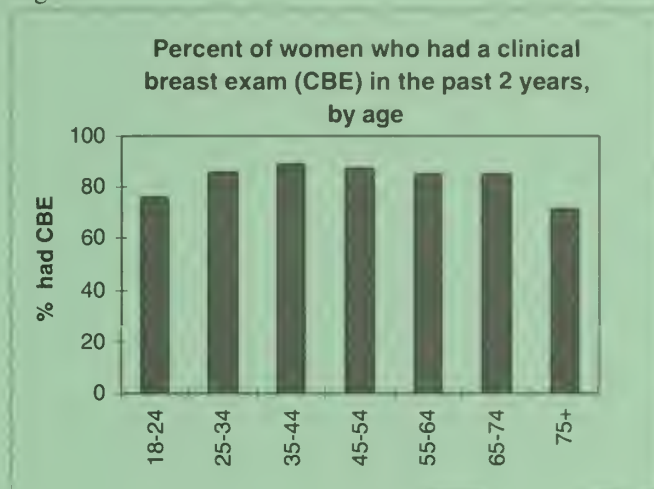


Figure 7b.

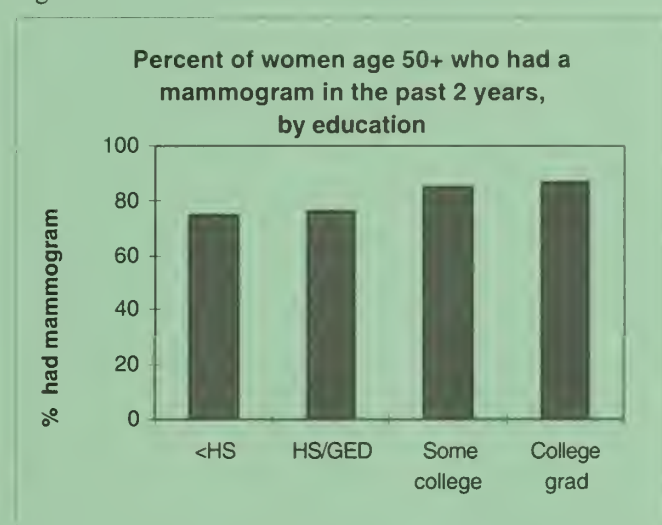
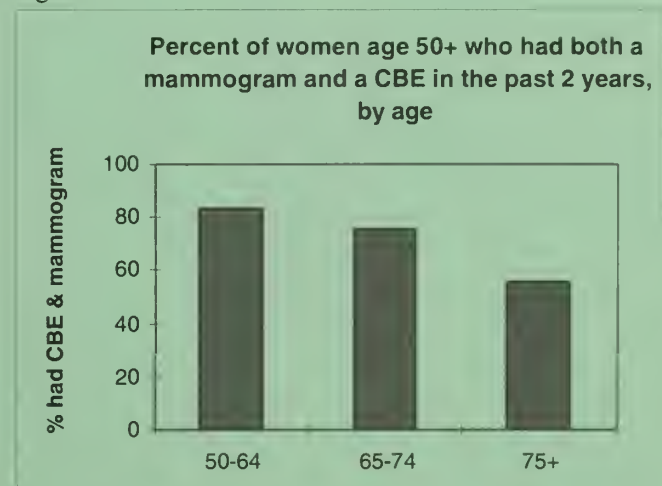


Figure 7c.



Cervical Cancer Screening

Pap smear (ever)

- 94% of women in Massachusetts had had a Pap smear¹ at least once in their lifetime

Pap smear at least once in lifetime:

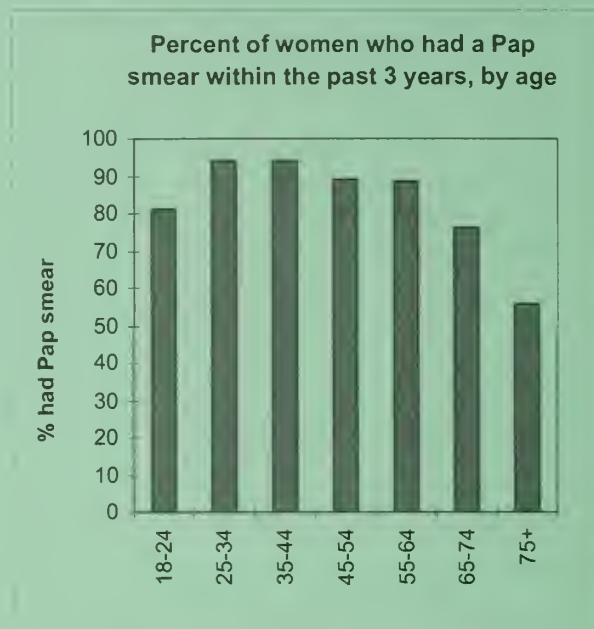
National median = 95%

Pap smear (past 3 years)

- Among women who had not had a hysterectomy, 87% had had their last Pap smear within the past 3 years
- Characteristics of women who were less likely to have been screened in the past 3 years:
 - 65+ years (Figure 8a)
 - less than high school education
 - below poverty line² (Figure 8b)

Pap smear in the past 3 years (women with intact uteri): National median = 85%

Figure 8a.



¹ The American Cancer Society recommends that all women aged 18+ have a Pap smear and pelvic exam every year until 3 or more consecutive normal exams are obtained. After this, women may have Pap smears less often, at the discretion of their physician.

² Poverty level was estimated according to the 1994 standard set by the US Census Bureau, based on household size and income.

Figure 8b.

Percent of women who had a Pap smear in the past 3 years, by poverty level²



Colorectal Cancer Screening

Stool blood test¹

- 33% of Massachusetts adults age 50 or older had had a stool blood test in the past 2 years
- Characteristics of adults age 50+ more likely to have had a stool blood test in the past 2 years:
 - female (Figure 9a)
 - 65-74 years
 - at least some college education

Stool blood test in past 2 years among adults age 50+: National median = 26%

Sigmoidoscopy¹

- 40% of adults age 50 or older had had a sigmoidoscopy or proctoscopic exam at least once in their lifetime
- Characteristics of adults age 50+ more likely to have had an exam:
 - male (Figure 9a)
 - more education (Figure 9b)
 - higher household income

Sigmoidoscopy at least once in lifetime among adults age 50+: National median = 41%

Stool blood test and sigmoidoscopy

- 15% of adults age 50+ had had both a stool blood test in the past 2 years and a sigmoidoscopy at least once in their lifetime

Figure 9a.

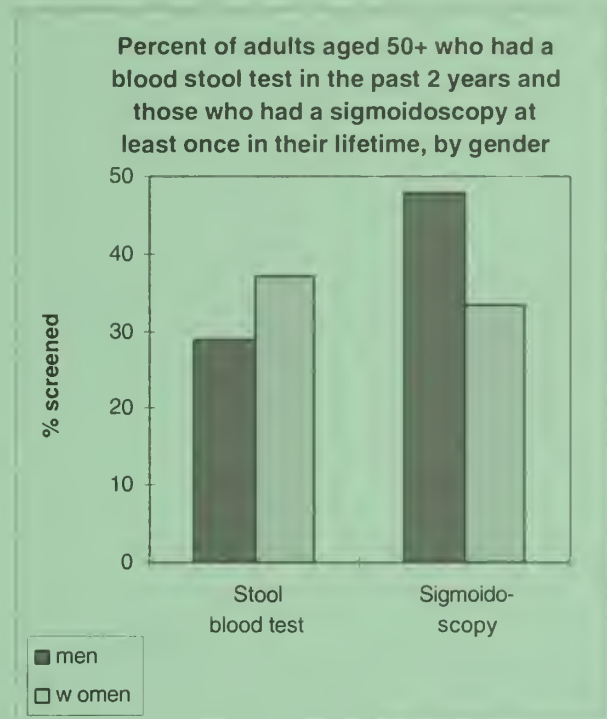
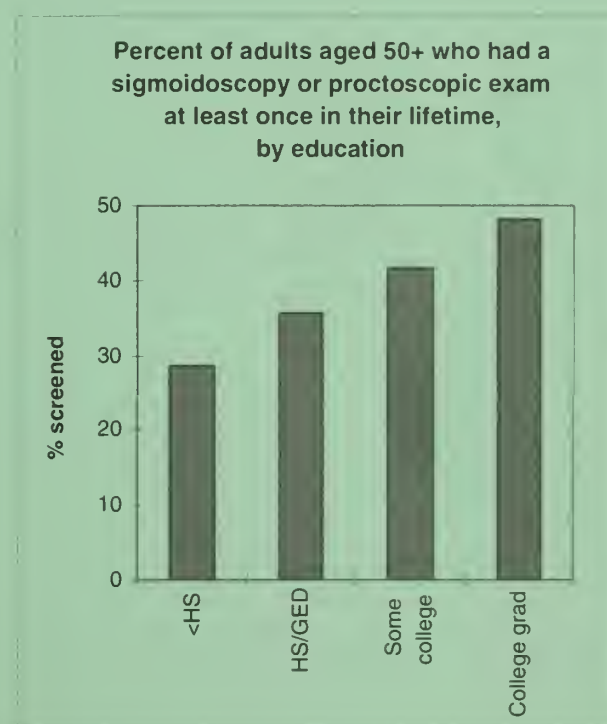


Figure 9b.



¹ The American Cancer Society recommends that all adults aged 50+ have a stool blood test every year and a sigmoidoscopy every 5 years. The analyses in this report focus on a variation of the recommendation for comparison with results reported for other states.

Cholesterol Screening

Cholesterol check (past 5 years)

- 73% of Massachusetts adults had had their blood cholesterol level measured within the past five years

Cholesterol check in past 5 years:

National median = 69%

- Characteristics of adults more likely to have checked blood cholesterol in the past 5 years:
 - 45+ years
 - white
 - college education
 - household income \$50,000 +

High blood cholesterol

- 25% of those who had ever had their blood cholesterol measured had high blood cholesterol
- Characteristics of adults more likely to have high blood cholesterol:
 - 55+ years
 - white (Figure 10)

High blood cholesterol: National median = 29%

Hypertension Screening

Blood pressure check (past 2 years)

- 96% of Massachusetts adults had had their blood pressure checked within the past two years

High blood pressure

- 20% of those who had ever checked their blood pressure had high blood pressure
- Characteristics of adults more likely to have high blood pressure:
 - 45+ years
 - high school education or less
 - lower household income (Figure 11)

High blood pressure: National median = 23%

Figure 10.

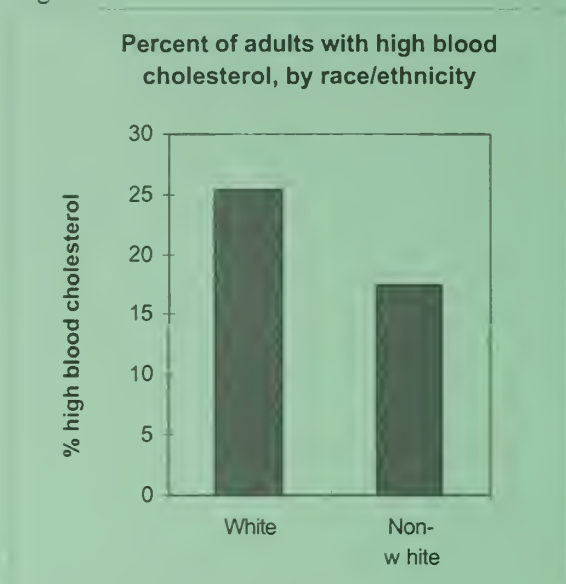
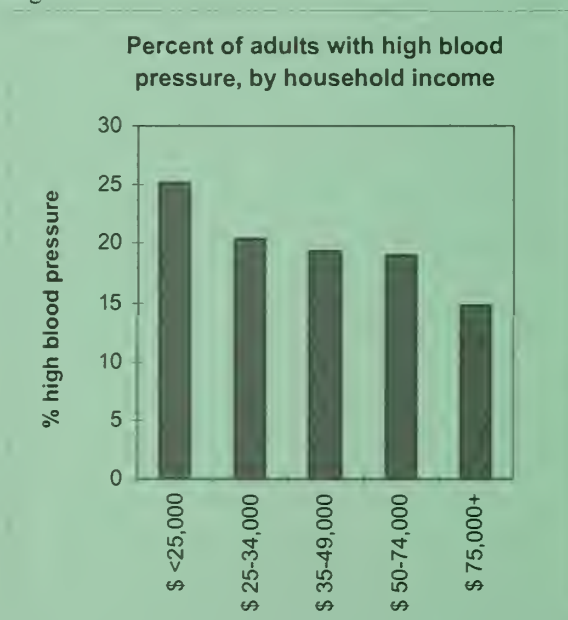


Figure 11.



Folic Acid

Use of folic acid

- 45% of Massachusetts women 18-44 years were taking folic acid either as part of a multivitamin or as a separate supplement
- Characteristics of women more likely to be taking folic acid:
 - white (Figure 12a)
 - 25-44 years
 - married
 - more education (Figure 12b)
 - household income \$25,000+

Knowledge of folic acid

- 33% of women had heard of folic acid and were able to correctly identify its role in the prevention of birth defects
- Characteristics of women more likely to correctly identify the purpose of taking folic acid:
 - white
 - married
 - more education
 - higher household income
- 44% of women who were taking folic acid were able to correctly identify its purpose, while 25% of women who were not taking folic acid were able to do so (Figure 12c)

Figure 12a.

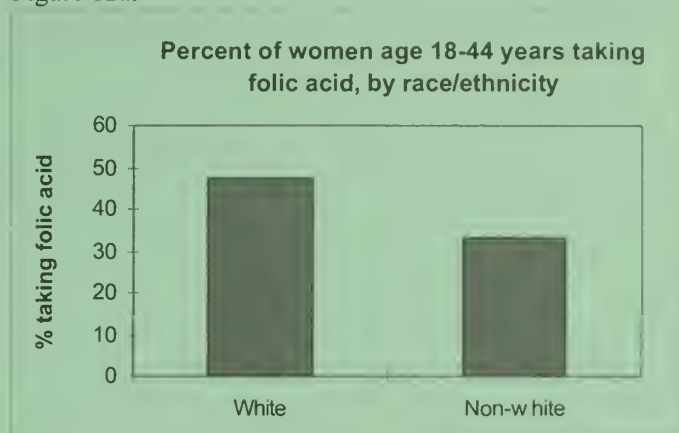


Figure 12b.

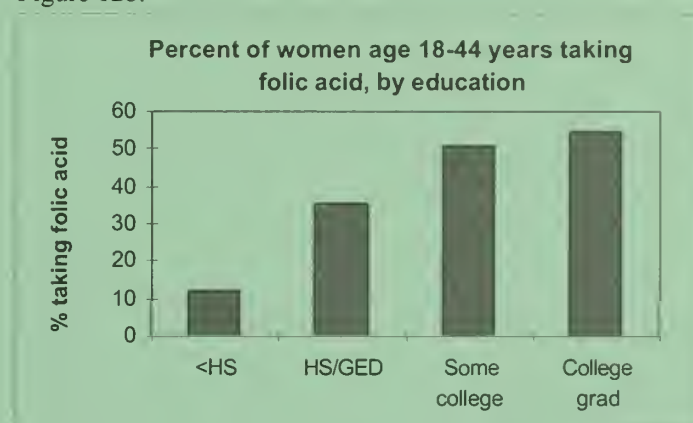
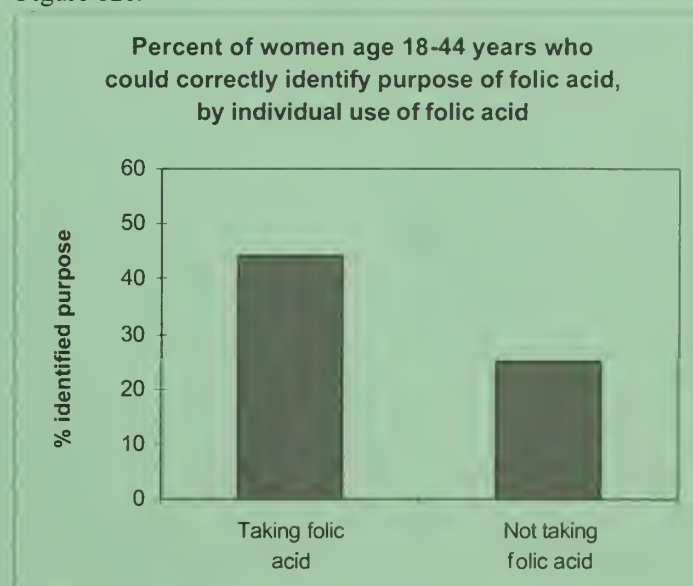


Figure 12c.



Adult Immunizations

Flu vaccination

- 66% of Massachusetts adults age 65+ received the flu vaccine in the past year
- Characteristics of those more likely to have received the flu vaccine:
 - white (Figure 13a)
 - male (Figure 13b)
 - 75+ years
 - at least some college education

Among adults of all ages having at least one of the chronic conditions considered to increase susceptibility to the flu, the proportion who received the flu vaccine in the past year ranged from 39% among those who had asthma to 62% among those who had diabetes or heart disease (Table 2).

Flu vaccination in past year among adults age 65+: National median = 66%

Table 2. Flu vaccination by chronic disease status

Chronic condition	% received flu vaccine
Diabetes	62
Heart disease	62
Asthma	39
Chronic bronchitis	46

Pneumonia vaccination

- 54% of Massachusetts adults age 65+ had been vaccinated against pneumonia at least once in their lifetime
- Characteristics of adults more likely to have received a pneumonia vaccine:
 - white (Figure 13a)
 - male (Figure 13b)
 - 75+ years

Pneumonia vaccination at least once in lifetime among adults 65+: National median = 50%

Figure 13a.

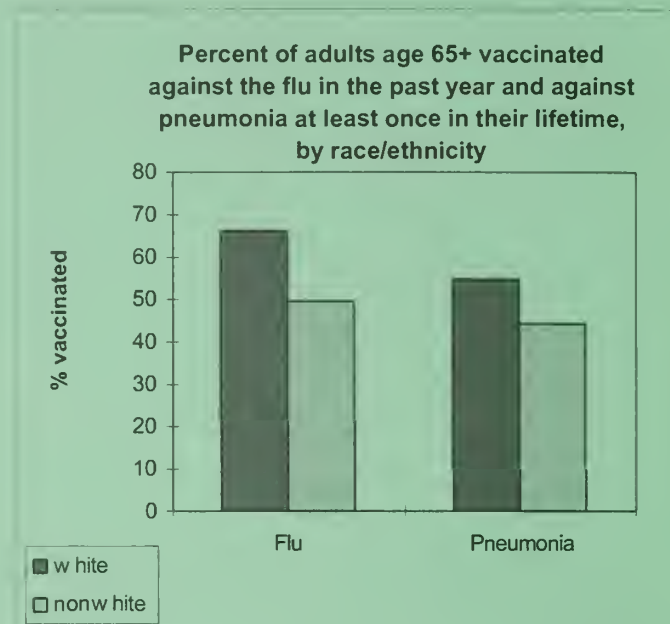
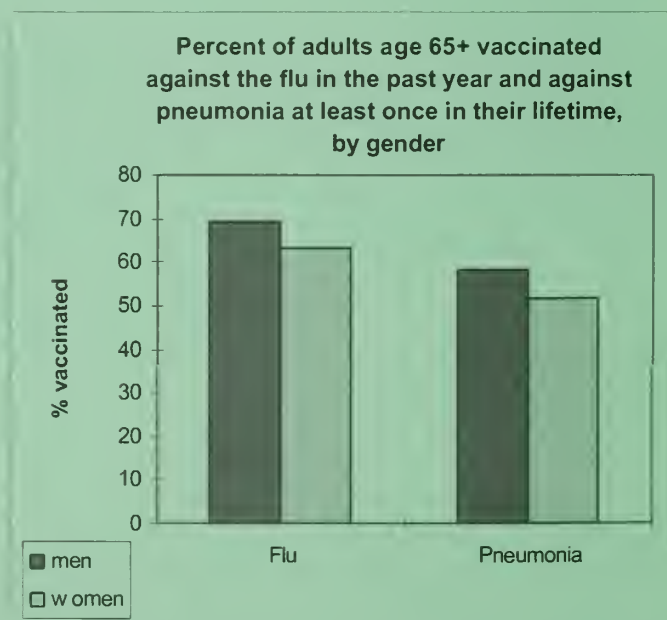


Figure 13b.



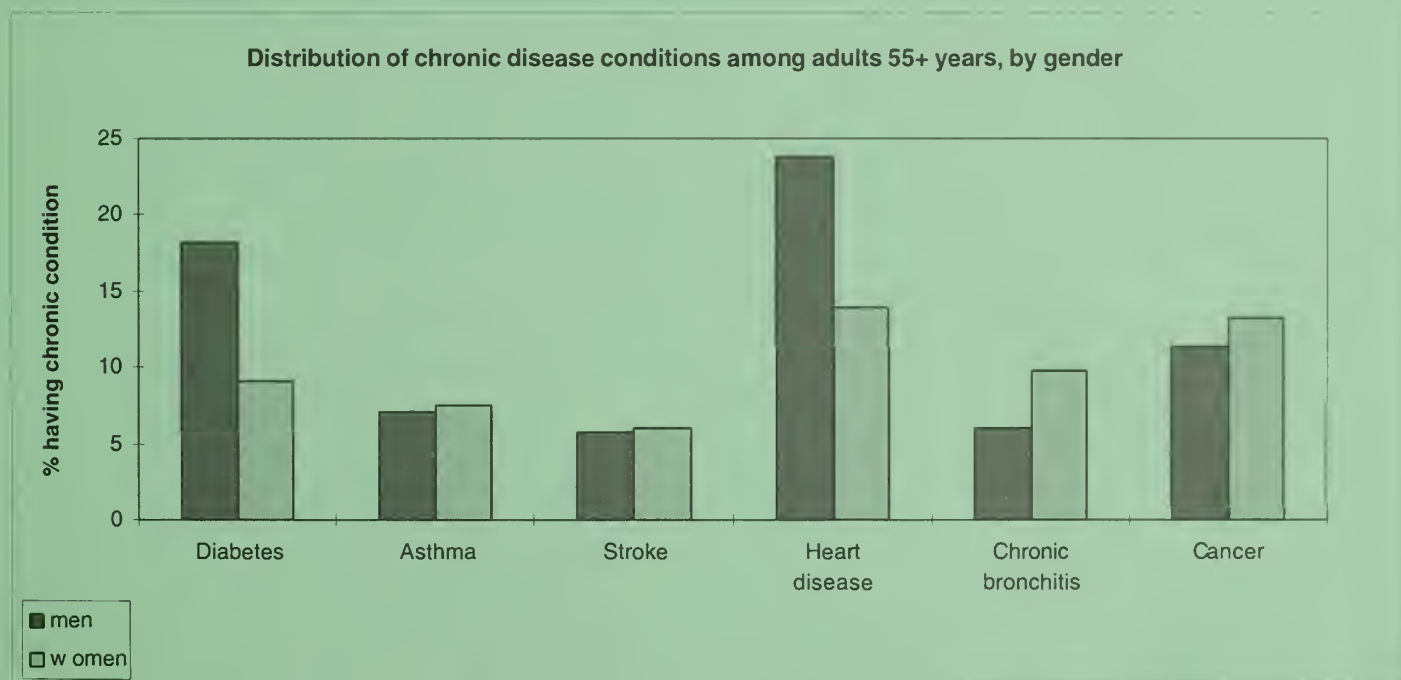
Chronic Conditions Among Older Adults

Residents were asked about having six selected chronic disease conditions. Adults age 55 or older reported currently having or ever having had: diabetes (13%), asthma (7%), heart disease (18%), stroke/cerebrovascular disease (6%), chronic bronchitis/emphysema/COPD (8%), or cancers other than benign skin cancer (12%).

Forty-three percent of adults reported currently having or ever having had at least one of the six chronic conditions listed above. Men, older adults, and those with less education were more likely to have or have ever had at least one chronic condition.

Men and women were almost equally likely to have had a stroke, asthma, or cancer (Figure 14). Men were more likely to have diabetes and heart disease, and women were more likely to have chronic bronchitis/emphysema/COPD.

Figure 14.



Osteoporosis

Knowledge of osteoporosis

- 90% of Massachusetts adults had heard of osteoporosis
- Characteristics of adults more likely to have heard of osteoporosis:
 - female
 - white or black
 - 25+ years
 - more education (Figure 15a)

Testing for and having osteoporosis

- 25% of women age 45+ had had a bone density scan to test for osteoporosis
- 10% of women age 45+ had been told they had osteoporosis
- Characteristics of women more likely to have osteoporosis:
 - older (Figure 15b)
 - lower household income (Figure 15c)

Prevention of osteoporosis

- 17% of women aged 45 or older were taking estrogen
- 39% of all women took calcium supplements for at least half of the month prior to interview or consumed 3 or more servings of dairy products on a daily basis

Figure 15a.

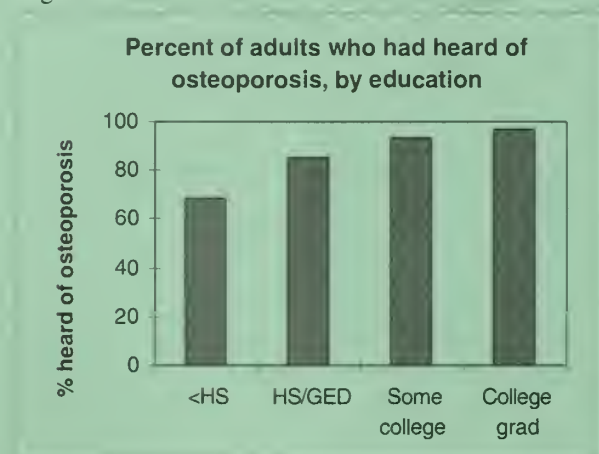


Figure 15b.

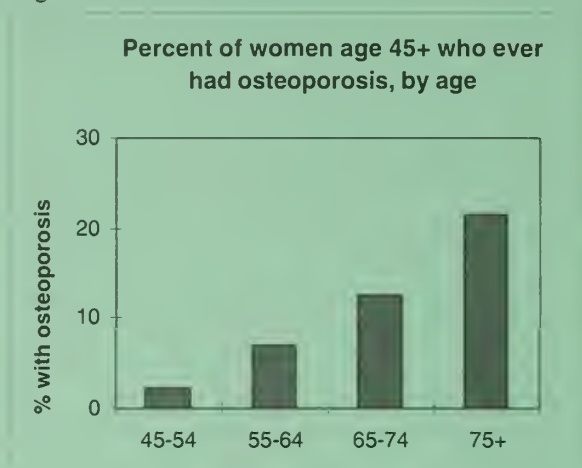
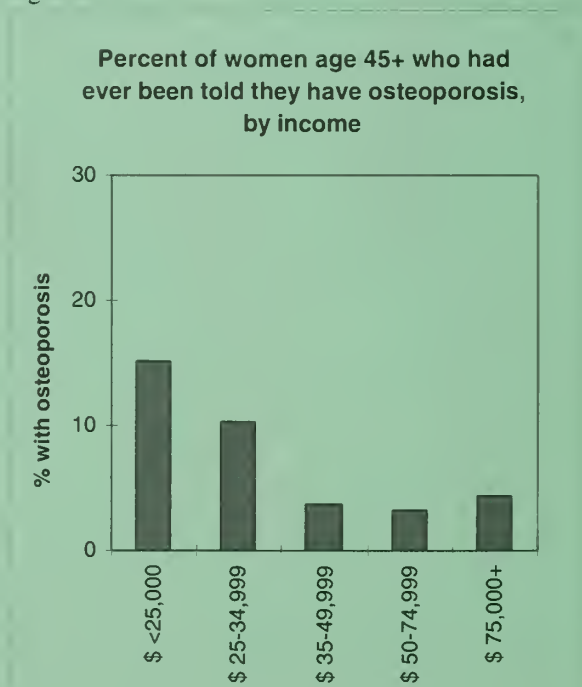


Figure 15c.



HIV/AIDS

HIV testing (ever)

- 46% of 18-64 year olds in Massachusetts had been tested for HIV/AIDS at least once in their lifetime

Ever tested for HIV/AIDS:

National median = 43%

HIV testing (past year)

- 13% of 18-64 year old adults were tested for HIV in the past year
- Characteristics of 18-64 year old adults more likely to have been tested in the past year:
 - male (Figure 16a)
 - 18-24 years
 - less than high school education

HIV testing (reasons)

The most common reasons for getting tested for HIV were to find out if an individual was infected (24%), to apply for life insurance (10%), as part of a routine check up (10%), and due to pregnancy (9%).

Perceived risk for HIV

Six percent of 18-64 year old adults perceived themselves as being at medium or high risk for contracting HIV.

HIV-related sexual behavior

Eleven percent of 18-64 year old adults had more than one sex partner in the past year. Men and adults in the 18-24 year age range were more likely to be in this category. Among adults who had had more than one sex partner in the past year, 68% used a condom the last time they had sexual intercourse. Men and women in the 18-24 year age range were more likely to have used a condom (Figure 16b). 51% of adults felt that proper use of a condom was very effective in preventing HIV infection. Those who had at least some college education were more likely to feel this way.

HIV/AIDS prevention programs

Seventy-nine percent of adults aged 18-64 agreed or strongly agreed with programs for supplying condoms in high schools. Individuals in the 18-24 year age range were more likely to support this idea. 61% of adults agreed or strongly agreed with needle exchange programs for injection drug users. Those who had a college education were more likely to support this program.

Figure 16a.

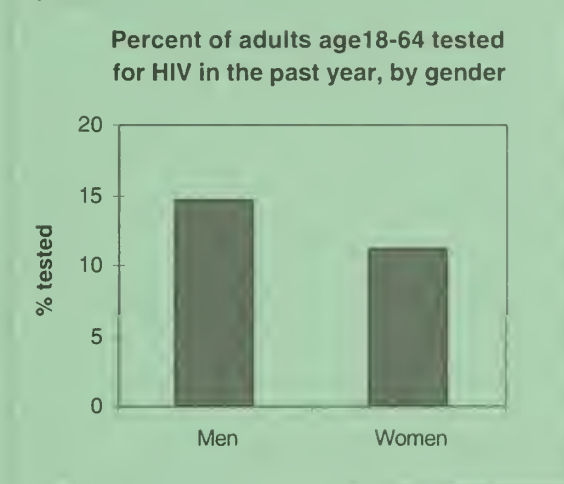
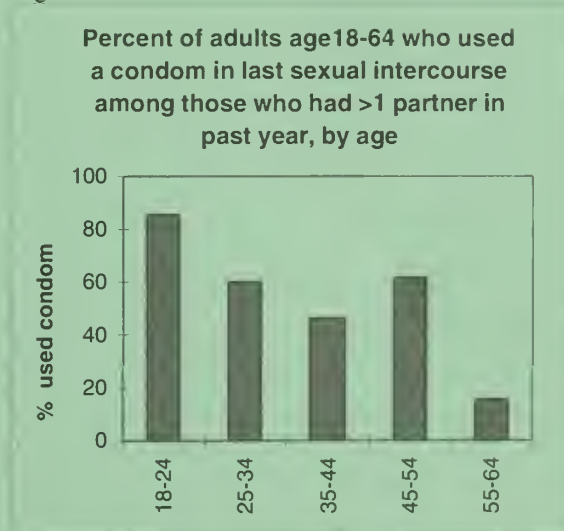


Figure 16b.



Violence

Hurt (past year)

- 2% of Massachusetts adults were physically or sexually hurt¹ in the past year, either by a stranger or someone they knew
- Men and women were equally likely to have been hurt during the year
- 58% of adults who were hurt in the past year were hurt by an intimate² partner

Hurt (ever)

- 16% of all adults had ever been hurt :
11% of men and 21% of women
- Among those who had been hurt at least once in their lifetime:
 - 36% were hurt by an intimate partner only
 - 40% were hurt by a person other than an intimate partner only
 - 24% were hurt by both an intimate partner and by someone other than an intimate partner

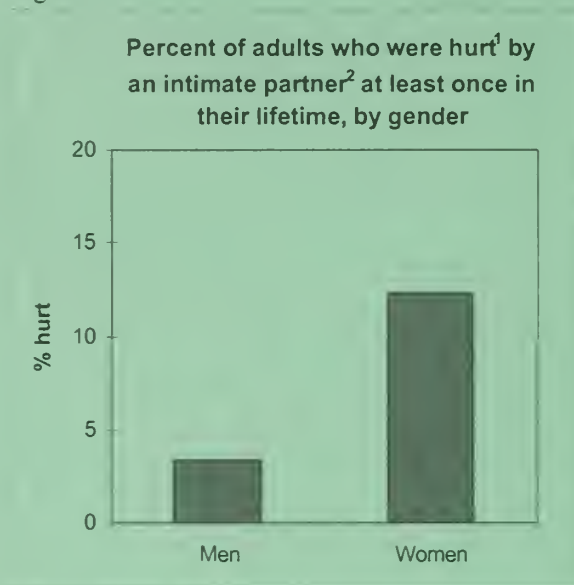
Hurt by an intimate partner (ever)

- 9% of all adults had ever been hurt by an intimate partner
- Characteristics of those more likely to have ever been hurt by an intimate partner:
 - younger than 35 years
 - female (Figure 17a)

Hurt by an intimate partner (past 5 years)

- 35% of women 18-59 years who had ever been hurt by an intimate partner had experienced physical or sexual violence within the past five years
- Women who were currently divorced or never married were more likely to have been hurt by an intimate partner in the past 5 years (Figure 17b)

Figure 17a.



¹ Hurt included being shoved, slapped, hit with an object, or forced into sexual activity.

² Intimate partner is a current or former spouse, partner, boyfriend, girlfriend, or date.

Figure 17b.

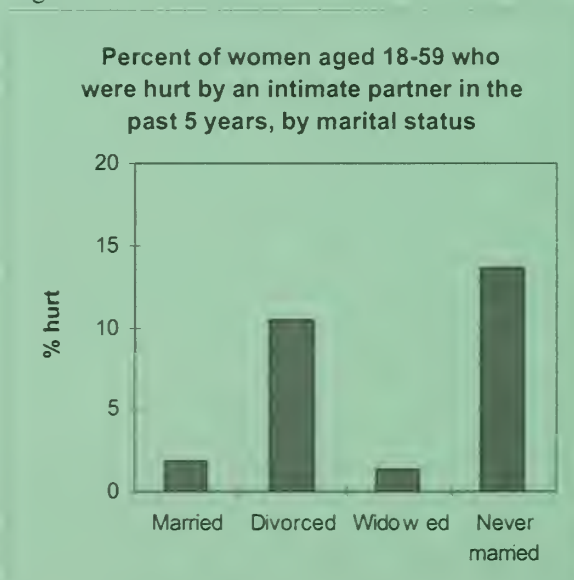


Table 3. Comparison of selected behavioral risk factors and preventive health measures between Massachusetts, the nation, Healthy People 2000 Objectives, and Massachusetts in 1992.

	1997 MA (%)	1997 National Median (%)	1997 National Ranking*	HP 2000 Objectives (%)	1992 MA (%)
Fair or poor health	12	13	20		9
Uninsured	8	12	3		10
Current smokers	20.5	23	6	15	22.8
Binge drinking	18	15	44		20
Chronic/heavy drinking	4	3	37		5
Driving while intoxicated	2	2	24		3
Always wear seatbelt	63	69	36	85	45
Oldest child <16 always wears seatbelt	89	83	19	85	77**
Mammogram in past 2 years (50+)	82	74	3		67
Mammogram & clinical breast exam in the past 2 years (50+)	75	67	4	60	58
Ever had a pap smear	94	95	36	95	92
Pap smear within the past 3 years for women who had intact uteri	87	85	6	85	83
Had a blood stool test in past 2 years (50+)	33	26	6	50	-
Ever had a sigmoidoscopy (50+)	40	41	26	40	37**
Cholesterol checked in past 5 years	73	70	3	75	75
High cholesterol	25	29	5		27
BP checked within past 2 years	96	94	4		96
High BP	20	23	2		20
Ever had pneumonia vaccine	54	50	6	60	22**
Had flu shot within past 12 months (65+)	66	66	26	60	49**
Ever tested for HIV/AIDS	46	43	-		27**
High/medium chances of getting HIV/AIDS	6	6	24		10

* Compared to states reporting lowest risk or healthiest behavior: 1st=best, 50th=worst. National rankings were taken from the CDC 1997 Behavioral Risk Surveillance System prevalence report.

** This number is based on data from the MA BRFS 1993 since this information was not collected in 1992.

[continued from page 2]

Limitations in the BRFSS data should be taken into account when interpreting the results. First, households without telephones did not have the opportunity to be included in the sample. According to the 1990 census, only 2% of Massachusetts households did not have a telephone, but the proportion of households below poverty level that lacked a phone was 10%. Adults in households with telephones may not have been captured in this survey, either due to barriers such as language and disability or due to lack of interest. Also, the BRFSS data are based on self-reports which make them subject to reporting biases. Respondents may have over-reported socially desirable behaviors and under-reported those that are not. Respondents may also have had difficulty recalling the frequency or timeframe of various behaviors. Finally, because the BRFSS surveys a randomly selected sample of Massachusetts adults, the results obtained here may differ from another random sample taken from the same population simply due to chance.

Data on selected variables from the BRFSS are available through the Massachusetts Community Health Information Profile (MassCHIP), an internet-accessible information service available from the Massachusetts Department of Public Health. Information about how to register as a MassCHIP user is available through the MDPH homepage located at <http://www.magnet.state.ma.us/dph/dphhome.htm>

Acknowledgments: This report was prepared by Daniel Brooks and Padmaja Patnaik of the Chronic Disease Surveillance Program. We wish to express our gratitude to the residents of Massachusetts who participated in this survey. For further information, please contact:

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